

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group
Art Unit: Unknown

Attorney
Docket No.: SHC0136

Applicant: Yoshitaka Mishima et al.

Invention: DISPOSABLE UNDERGARMENT

Serial No: Unknown

Filed: Herewith

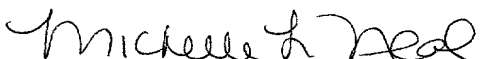
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on August 10, 2001


Michelle L. Neal

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Prior to the examination of the above-identified application, please amend the application
as follows:

IN THE SPECIFICATION

Please replace the last paragraph on page 2 continuing on page 3 with the following:

- It is an object of this invention to provide a disposable undergarment that can be
reliably held around a wearer's waist to prevent the undergarment from slipping down without
excessively compressing the wearer's thighs.- -

Please replace the first full paragraph on page 4 with the following:

- According to this invention a pair of elastically stretchable second wings prepared

separately of the undergarment extend outward from the transversely opposite side edge portions of the waist region in the transverse direction so as to be placed upon the first wings, the second wings having second proximal side edge portions lying on the transversely opposite side edge portions of the waist region and second free side edge portions spaced outward from the first proximal side edge portions in the transverse direction and fixed to the first free side edge portions, wherein the second proximal side edge portions are not contiguous to the transversely opposite side edge portions of the crotch region and a stretch stress generated in the second wings as the front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction.- -

Please replace the last paragraph beginning on page 4 and continuing on page 5 with the following:

- -According to one embodiment of this invention, a transverse dimension of the first wing as measured from its first proximal side edge portion to its first free side edge portion and a transverse dimension of the second wing as measured from its second proximal side edge portion to its second free side edge portion are in a relationship of the first wing \approx the second wing or the first wing $>$ the second wing and wherein values of the stretch stress generated in the first and second wings as these first and second wings are stretched outward in the transverse direction are in a relationship of the first wing $<$ the second wing.- -

Please replace the third full paragraph on page 6 with the following:

- -The diaper 1 basically comprises a liquid-pervious topsheet 2, a liquid-impervious backsheet 3 and a liquid-absorbent core 4 disposed between said top- and backsheets 2, 3 and entirely covered with and bonded to water-pervious tissue paper (not shown). The core 4 is

bonded to at least one of the inner surfaces of the top- and backsheets 2, 3 with the tissue paper therebetween.- -

Please replace the last paragraph beginning on page 7 and continuing on page 8 with the following:

- Each of the first wings 8 has a substantially rectangular shape and formed from an elastically stretchable sheet. Specifically, the first wing 8 has a first proximal side edge portion 8a lying on the side edge portions 5c of the rear waist region 22 and extending in the longitudinal direction, a first free side edge portion 8c spaced apart from the proximal side edge portion 8a in the transverse direction and extending in the longitudinal direction, and an intermediate portion 8b lying between the proximal side edge portion 8a and the free side edge portion 8c. The proximal side edge portion 8a is continuous to the side edge portion 5b of the diaper 1 in the crotch region 21.- -

Please replace the first full paragraph on page 8 with the following:

- Each of the second wings 9 is formed from an elastically stretchable sheet and presents a substantially rectangular shape. The second wing 9 lies on and is placed upon the inner surface of the first wing 8. More specifically, the second wing 9 has a second proximal side edge portion 9a lying on the side edge portions 5c of the rear waist region 22 and extending in the longitudinal direction, a second free side edge portion 9c spaced apart from the proximal side edge portion 9a in the transverse direction and extending in the longitudinal direction, and an intermediate portion 9b lying between the proximal side edge portion 9a and the free side edge portion 9c. The second wing 9 is different from the first wing 8 in that proximal side edge portion 9a is not continuous to the side edge portion 5b of the diaper 1 in the crotch region 21.- -

Please replace the second full paragraph on page 16 with the following:

- -In the diaper 1 according to both embodiments, it is also possible without departing from the scope of this invention to attach the first and second wings 8, 9 to the transversely opposite side edge portions 5a of the diaper 1 in the front waist region 20. It is also possible to form the first wings 8 from the backsheet 3. In this case, a laminated sheet consisting of a hydrophobic nonwoven fabric having an elastic stretchability and plastic film having an elastic stretchability is preferably used as the backsheet 3 which is, in turn, intermittently bonded under tension in the longitudinal direction as well as in the transverse direction to the topsheet 2 in their portions placed upon each other.- -

Please replace the last paragraph beginning on page 16 and continuing on page 17 with the following:

- -The topsheet 2 may be formed from a liquid-pervious sheet such as a nonwoven fabric or porous plastic film, preferably from a liquid-pervious hydrophilic sheet. The backsheet 3 may be formed from a hydrophobic nonwoven fabric, liquid-impervious plastic film or a laminated sheet of hydrophobic nonwoven fabric and plastic film, preferably from a breathable but liquid-impervious sheet.- -

Please replace the first full paragraph on page 17 with the following:

- -The first and second wings 8, 9 may be formed from a nonwoven fabric or plastic film both being elastically stretchable or a laminated sheet consisting of such nonwoven fabric and plastic film. The leak-barrier sheets 7 may be formed from a hydrophobic nonwoven fabric.- -

Please replace the last paragraph on page 18 and continuing on page 19 with the following:

- -With the undergarment arranged so that the stretch stress generated in the second wings is higher than that generated in the first wings, the second wings further reliably hold the undergarment around the wearer's waist and thus prevent the undergarment from getting out of its proper position.- -

Please replace the first full paragraph on page 19 with the following:

- -With the undergarment arranged so that the transverse dimension of the second wing as measured from its proximal side edge portion to its free side edge portion is smaller than the corresponding dimension of the first wing and the stretch stress per unit area generated in the first and second wings is substantially same, the stretch stress generated in the second wing is substantially higher than that generated in the first wing as the first and second wings are stretched outward in the transverse direction. In a consequence, for the undergarment of such arrangement also, the undergarment can be further reliably held by the second wings around the wearer's waist and the effect to prevent the undergarment from getting out of its proper position can be thereby achieved.- -

IN THE CLAIMS

Please amend claim 1 as follows:

1. (Amended) A disposable undergarment comprising:
transversely opposite side edge portions extending in a longitudinal direction;
longitudinally opposite end portions extending in a transverse direction;
a front waist region;

a rear waist region;

a crotch region extending between said front waist and said rear waist region in said longitudinal direction;

a pair of elastically stretchable first wings extending outward from transversely opposite side edge portions of at least one of said front waist region and said rear waist region, said first wings having first proximal side edge portions lying on said transversely opposite side edge portions of said waist region and first free side edge portions spaced outward from said first proximal side edge portions in said transverse direction, said first free side edge portions being provided with means to connect said front and rear waist regions to each other, said first proximal side edge portions being contiguous to the transversely opposite side edge portions of said crotch region and a stretch stress generated in said first wings as said front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction as well as in a thigh-surrounding direction; and

a pair of elastically stretchable second wings extending outward from the transversely opposite side edge portions of said waist region in said transverse direction, said second wings being placed upon said first wings, said second wings having second proximal side edge portions lying on said transversely opposite side edge portions of said waist region and second free side edge portions spaced outward from said first proximal side edge portions in said transverse direction and fixed to said first free side edge portions, said second proximal side edge portions are non-contiguous to the transversely opposite side edge portions of said crotch region, and a stretch stress generated in said second wings as said front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction.

Please amend Claim 2 as follows:

2. (Amended) The undergarment according to Claim 1, wherein a transverse dimension D_1 of said first wings as measured from their first proximal side edge portion to their first free side edge portion and a transverse dimension D_2 of said second wings as measured from their second proximal side edge portion to their second free side edge portion are in a relationship of D_1 being greater than or equal to D_2 , and values of said stretch stress generated in said first and second wings as these first and second wings are stretched outward in said transverse direction are in a relationship of the values of said stretch stress of said first wing being less than values of said stretch stress of said second wing.

• • • R E M A R K S • • •

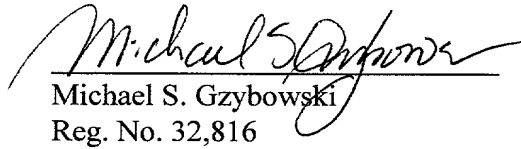
By the present Preliminary Amendment, the specification and claims have been revised to more clearly describe applicant's invention in accordance with the requirements of 35 U.S.C. § 112.

Care has been taken so as to avoid the addition of new matter in the specification and claims.

Entry of the present Preliminary Amendment prior to the examination of the application is respectfully requested.

In the event applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, applicant hereby petitions therefor and authorizes that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Respectfully submitted,


Michael S. Gzybowski
Reg. No. 32,816

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Suite 800
Fort Wayne, Indiana 46802
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Changes Made to Specification Paragraphs

The last paragraph beginning on page 2 and continuing on page 3 has been amended as follows:

- -It is an object of this invention to provide a disposable undergarment [improved so] that [the undergarment] can be reliably held around a wearer's waist to prevent the undergarment from slipping down without excessively compressing the wearer's thighs.- -

The first full paragraph on page 4 has been amended as follows:

- -[The improvement according] According to this invention [is in that] a pair of elastically stretchable second wings prepared separately of the undergarment extend outward from the transversely opposite side edge portions of the waist region in the transverse direction so as to be placed upon the first wings, the second wings having second proximal side edge portions lying on the transversely opposite side edge portions of the waist region and second free side edge portions spaced outward from the first proximal side edge portions in the transverse direction and fixed to the first free side edge portions, wherein the second proximal side edge portions are not contiguous to the transversely opposite side edge portions of the crotch region and a stretch stress generated in the second wings as the front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction.- -

The last paragraph beginning on page 4 and continuing on page 5 has been amended as follows:

- -According to one [preferred] embodiment of this invention, a transverse dimension of the first wing as measured from its first proximal side edge portion to its first free side edge

portion and a transverse dimension of the second wing as measured from its second proximal side edge portion to its second free side edge portion are in a relationship of the first wing \approx the second wing or the first wing $>$ the second wing and wherein values of the stretch stress generated in the first and second wings as these first and second wings are stretched outward in the transverse direction are in a relationship of the first wing $<$ the second wing.- -

The third full paragraph on page 6 has been amended as follows:

- -The diaper 1 basically comprises a liquid-pervious topsheet 2, a liquid-impervious backsheet 3 and a liquid-absorbent core 4 disposed between said top- and backsheets 2, 3 and entirely covered with and bonded to water-pervious tissue paper (not shown). The core 4 is bonded to at least one of the inner surfaces of the top- [and/backsheets] and backsheets 2, 3 with the tissue paper therebetween.- -

The last paragraph beginning on page 7 and continuing on page 8 has been amended as follows:

- -Each of the first wings 8 has a substantially rectangular shape and formed [with] from an elastically stretchable sheet. Specifically, the first wing 8 has a first proximal side edge portion 8a lying on the side edge portions 5c of the rear waist region 22 and extending in the longitudinal direction, a first free side edge portion 8c spaced apart from the proximal side edge portion 8a in the transverse direction and extending in the longitudinal direction, and an intermediate portion 8b lying between the proximal side edge portion 8a and the free side edge portion 8c. The proximal side edge portion 8a is continuous to the side edge portion 5b of the diaper 1 in the crotch region 21.- -

The first full paragraph on page 8 has been amended as follows:

- Each of the second wings 9 is formed [with] from an elastically stretchable sheet and presents a substantially rectangular shape. The second wing 9 lies on and is placed upon the inner surface of the first wing 8. More specifically, the second wing 9 has a second proximal side edge portion 9a lying on the side edge portions 5c of the rear waist region 22 and extending in the longitudinal direction, a second free side edge portion 9c spaced apart from the proximal side edge portion 9a in the transverse direction and extending in the longitudinal direction, and an intermediate portion 9b lying between the proximal side edge portion 9a and the free side edge portion 9c. The second wing 9 is different from the first wing 8 in that proximal side edge portion 9a is not continuous to the side edge portion 5b of the diaper 1 in the crotch region 21.- -

The second full paragraph on page 16 has been amended as follows:

- In the diaper 1 according to both embodiments, it is also possible without departing from the scope of this invention to attach the first and second wings 8, 9 to the transversely opposite side edge portions 5a of the diaper 1 in the front waist region 20. It is also possible to form the first wings 8 [by] from the backsheet 3. In this case, a laminated sheet consisting of a hydrophobic nonwoven fabric having an elastic stretchability and plastic film having an elastic stretchability is preferably used as the backsheet 3 which is, in turn, intermittently bonded under tension in the longitudinal direction as well as in the transverse direction to the topsheet 2 in their portions placed upon each other.- -

The last paragraph beginning on page 16 and continuing on page 17 has been amended as follows:

- The topsheet 2 may be formed [with] from a liquid-pervious sheet such as a

nonwoven fabric or porous plastic film, preferably [with] from a liquid-pervious hydrophilic sheet. The backsheet 3 may be formed [with] from a hydrophobic nonwoven fabric, liquid-impervious plastic film or a laminated sheet of hydrophobic nonwoven fabric and plastic film, preferably [with] from a breathable but liquid-impervious sheet.- -

The first full paragraph on page 17 has been amended as follows:

- -The first and second wings 8, 9 may be formed [with] from a nonwoven fabric or plastic film both being elastically stretchable or a laminated sheet consisting of such nonwoven fabric and plastic film. The leak-barrier sheets 7 may be formed [with] from a hydrophobic nonwoven fabric.- -

The last paragraph on page 18 and continuing on page 19 has been amended as follows:

- -With the undergarment arranged so that the stretch stress generated in the second wings is higher than that generated in the first wings, the second wings further reliably hold the undergarment around the wearer's waist and thus [improve an effect to] prevent the undergarment from getting out of its proper position.- -

The first full paragraph on page 19 has been amended as follows:

- -With the undergarment arranged so that the transverse dimension of the second wing as measured from its proximal side edge portion to its free side edge portion is smaller than the corresponding dimension of the first wing and the stretch stress per unit area generated in the first and second wings is substantially same, the stretch stress generated in the second wing is substantially higher than that generated in the first wing as the first and second wings are stretched outward in the transverse direction. In a consequence, for the undergarment of such

arrangement also, the undergarment can be further reliably held by the second wings around the wearer's waist and the effect to prevent the undergarment from getting out of its proper position can be thereby [improved] achieved. - -

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Changes Made to Claims

Claim 1 has been amended as follows:

1. (Amended) A disposable undergarment comprising:

[contoured by] transversely opposite side edge portions extending in a longitudinal direction; [and]

longitudinally opposite end portions extending in a transverse direction; [so as to be composed, in the longitudinal direction, of]

a front waist [region,] region;

a rear waist [region] region; [and]

a crotch region extending between [these] said front waist [regions,] and said rear waist region in said longitudinal direction; [said undergarment having]

a pair of elastically stretchable first wings extending outward from transversely opposite side edge portions of at least one of said front waist region [and/or] and said rear waist region, said first wings having first proximal side edge portions lying on said transversely opposite side edge portions of said waist region and first free side edge portions spaced outward from said first proximal side edge portions in said transverse direction, said first free side edge portions being provided with means to connect said front and rear waist regions to each [other wherein] other, said first proximal side edge portions [are] being contiguous to the transversely opposite side edge portions of said crotch region and a stretch stress generated in said first wings as said front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction as well as in a thigh-surrounding [direction, wherein:] direction; and

a pair of elastically stretchable second wings [prepared separately of said undergarment extend] extending outward from the transversely opposite side edge portions of said waist region in [the] said transverse [direction so as to be] direction, said second wings being placed upon said

first wings, said second wings having second proximal side edge portions lying on said transversely opposite side edge portions of said waist region and second free side edge portions spaced outward from said first proximal side edge portions in said transverse direction and fixed to said first free side edge portions, [wherein] said second proximal side edge portions are [not contiguous] non-contiguous to the transversely opposite side edge portions of said crotch [region] region, and a stretch stress generated in said second wings as said front and rear waist regions are connected to each other is exerted upon the undergarment in a waist-surrounding direction.

Claim 2 has been amended as follows:

2. (Amended) The undergarment according to Claim 1, wherein a transverse dimension D_1 of said first [wing] wings as measured from [its] their first proximal side edge portion to [its] their first free side edge portion and a transverse dimension D_2 of said second [wing] wings as measured from [its] their second proximal side edge portion to [its] their second free side edge portion are in a relationship of [the first wing = the second wing or the first wing > the second wing] D_1 being greater than or equal to D_2 , and [wherein] values of said stretch stress generated in said first and second wings as these first and second wings are stretched outward in said transverse direction are in a relationship of the values of said stretch stress of said first [wing < the] wing being less than values of said stretch stress of said second wing.